

Mineral Industry Surveys

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CHROMIUM IN JUNE 2005

On the basis of gross weight, consumption of chromium ferroalloys and metal in June 2005 increased slightly compared with consumption in May 2005; consumption in the second quarter 2005 decreased slightly compared with consumption in the first quarter 2005 and decreased 5% compared with consumption in the second quarter 2004, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in June 2005, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end

of June 2005, and U.S. foreign trade data for selected chromium-containing materials in May 2005.

Update

The Defense National Stockpile Center (DNSC) announced that no ferrochromium was sold in July (Defense National Stockpile Center, 2005).

Reference Cited

Defense National Stockpile Center, 2005, Stockpile announces ferrochromium sales for July 2005: Defense National Stockpile Center, News Release DNSC-05-2636, August 5, 1p.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2004	2005				
	January- December ²	First quarter	April	May	June	January- June ²
Production:						
Stainless steel production ³	2,000,000	610,000	206,000	212,000	200,000	1,230,000 ⁴
Components of U.S. supply:						
Stainless steel scrap receipts	787,000	186,000	65,500	51,500 ^r	62,300	366,000
Stainless steel scrap consumption	1,120,000	268,000	94,700	78,300 ^r	85,600	527,000
Imports for consumption:						
Chromite ore	153,000	39,700	216	19,100	NA	58,900 ⁵
Ferrochromium:						
More than 4% carbon	398,000	117,000	55,800	18,700	NA	192,000 ⁵
More than 3% carbon but not more than 4% carbon	30	18	--	--	NA	18 ⁵
More than 0.5%, but not more than 3% carbon	5,720	2,430	1,040	21	NA	3,490 ⁵
Not more than 0.5% carbon	31,400	11,100	4,310	4,820	NA	20,200 ⁵
Ferrochromium silicon	30,600	10,200	3,690	500	NA	14,400 ⁵
Total ferroalloy imports	466,000	141,000	64,800	24,000	NA	230,000 ⁵
Chromium metal ⁶	9,650	3,020	1,050	991	NA	5,050 ⁵
Stainless steel	811,000	218,000	66,500	65,700	NA	350,000 ⁵
Stainless steel scrap	146,000	31,800	14,200	11,100	NA	57,100 ⁵
Distribution of U.S. supply:						
Consumption, industry, chromium ferroalloys and metal	432,000	105,000	36,700 ^r	33,300 ^r	33,400	208,000
Exports:						
Chromite ore	43,100	12,000	6,930	5,040	NA	24,000 ⁵
Chromium ferroalloys:						
High-carbon ferrochromium	6,580	3,690	575	578	NA	4,840 ⁵
Low-carbon ferrochromium	1,410	1,900	103	76	NA	2,080 ⁵
Ferrochromium silicon	1,150	48	8	--	NA	56 ⁵
Total ferroalloy exports	9,140	5,630	686	653	NA	6,970 ⁵
Chromium metal	931	205	85	64	NA	354 ⁵
Stainless steel	323,000	92,300	38,700	37,600	NA	169,000 ⁵
Stainless steel scrap	478,000	138,000	76,100	43,100	NA	257,000 ⁵
Stocks at end of period:						
Consumer, industry, chromium ferroalloys and metal	XX	XX	12,400 ^r	12,400 ^r	13,000	XX
Government stockpile:						
Chromium ferroalloys	XX	XX	546,000	546,000	513,000	XX
Chromium metal	XX	XX	6,190	6,190	6,190	XX

¹Revised. NA Not available. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

⁴Includes revised data that is not broken out by specific month.

⁵Includes January through May data; June data not available.

⁶Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS
OF CHROMIUM PRODUCTS IN 2005^{1,2}

(Metric tons, gross weight unless otherwise noted)

	May	June	January- June ³
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	369 ^r	389	2,330
High-strength low-alloy steel	642	631	3,770
Stainless and heat-resisting steel	28,500 ^r	28,400	178,000
Full alloy steel	1,510	1,580	9,770
Electrical steel	W	W	W
Tool steel	468	453	2,710
Unspecified steel	W	W	W
Cast irons	W	W	W
Superalloys	773	887	5,060
Other alloys ⁴	62	57	386
Total	33,300 ^r	33,400	208,000
Total, chromium content	19,300 ^r	19,400	121,000
Consumption by material:			
Low-carbon ferrochromium	1,810 ^r	1,820	11,500
High-carbon ferrochromium	27,700 ^r	28,000	175,000
Ferrochromium silicon	3,100 ^r	2,900	17,500
Chromium metal	425	458	2,580
Chromite ore	W	W	W
Chromium-aluminum alloy	32	26	178
Other chromium materials	W	W	W
Total	33,300 ^r	33,400	208,000
Total, chromium content	19,300 ^r	19,400	121,000
Consumer stocks:			
Low-carbon ferrochromium	2,040 ^r	2,080	XX
High-carbon ferrochromium	8,840 ^r	9,360	XX
Ferrochromium silicon	1,260 ^r	1,280	XX
Chromium metal	181	161	XX
Chromite ore	W	W	XX
Chromium-aluminum alloy	29	40	XX
Other chromium materials	W	W	XX
Total	12,400 ^r	13,000	XX
Total, chromium content	7,310 ^r	7,630	XX

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes estimates.

³May include revised data.

⁴Includes welding and alloy hard-facing rods and materials; wear- and corrosion-resistant alloys; and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY
OF CHROMIUM MATERIALS^{1,2}

(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2004:			
June	425,000	208,000	6,660
July	414,000	208,000	6,670
August	412,000	206,000	6,670
September	408,000	192,000	6,670
October	404,000	192,000	6,670
November	398,000	191,000	6,670
December	398,000	191,000	6,670
2005:			
January	386,000	190,000	6,190
February	378,000	188,000	6,190
March	368,000	187,000	6,190
April	359,000	187,000	6,190
May	359,000	187,000	6,190
June	331,000	182,000	6,190

¹Data are rounded to no more than three significant digits.

²These Government stocks are reported by the Defense National Stockpile Center in Inventory of Stockpile Materials R-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the R-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The R-1 report excludes chromium materials that are committed and awaiting shipment.

Source: Defense National Stockpile Center.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL¹

Period	Chromite ore		Chromium ferroalloys ²			Chromium metal ³	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2004:							
May	3,920	\$480	370	198	\$443	177	\$1,850
June	11,000	1,570	671	362	931	79	1,400
July	8,180	2,130	713	398	1,000	100	1,570
August	10,200	2,680	533	322	685	93	1,510
September	2,750	1,590	706	401	876	53	1,290
October	823	270	565	347	799	58	1,190
November	507	197	616	398	843	46	1,020
December	771	231	639	388	897	51	657
January-December	43,100	10,400	9,140	5,320	12,000	931	17,600
2005:							
January	2,550	618	427	257	610	103	1,070
February	1,540	404	2,150	1,330	2,910	35	796
March	7,910	1,310	3,050	1,850	4,070	66	983
April	6,930	1,820	686	419	913	85	1,580
May	5,040	923	653	402	804	64	1,190
January-May	24,000	5,080	6,970	4,250	9,310	354	5,620

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

³Includes chromium metal waste and scrap and unwrought powders.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL¹

(Metric tons)

	2004	2005		
	January- December ²	April	May	January- May ²
Chromite ore:				
More than 40% but less than 46% chromic oxide:				
Gross weight	1,690	97	96	508
Chromic oxide content	761	44	44	232
46% or more chromic oxide:				
Gross weight	151,000	119	19,000	58,400
Chromic oxide content	71,600	59	9,130	27,400
Total, all grades:				
Gross weight	153,000	216	19,100	58,900
Chromic oxide content	72,400	103	9,180	27,700
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5%:				
Gross weight	31,400	4,310	4,820	20,200
Chromium content	21,100	2,970	3,320	13,800
More than 0.5% but not more than 3%:				
Gross weight	5,720	1,040	21	3,490
Chromium content	3,830	718	15	2,270
Total, low-carbon:				
Gross weight	37,100	5,350	4,850	23,700
Chromium content	24,900	3,690	3,330	16,100
Medium-carbon: ⁴				
Gross weight	30	--	--	18
Chromium content	16	--	--	NA
High-carbon: ⁵				
Gross weight	398,000	55,800	18,700	192,000
Chromium content	223,000	32,100	10,900	112,000
Total, all grades:				
Gross weight	435,000	61,200	23,500	216,000
Chromium content	248,000	35,800	14,200	128,000
Chromium metal:				
Unwrought powders	1,350	86	64	338
Waste and scrap	94	11	--	14
Other than waste and scrap and unwrought powders	8,200	950	928	4,700
Total, all grades	9,650	1,050	991	5,050

NA Not available. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Ferrochromium containing not more than 3% carbon.

⁴Ferrochromium containing more than 3% carbon but not more than 4% carbon.

⁵Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2005, BY GRADE AND BY COUNTRY¹

Grade and country	May			January-May ²		
	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value ³ (thousands)
High-carbon ferrochromium: ⁴						
China	8	5	\$5	13	8	\$11
Kazakhstan	7	5	9	48,500	33,600	50,600
Russia	6,800	4,510	6,170	23,200	15,300	19,800
South Africa	7,840	3,960	4,740	90,400	45,800	57,400
Zimbabwe	4,050	2,410	3,530	29,700	17,700	24,200
Total	18,700	10,900	14,500	192,000	112,000	152,000
Medium-carbon ferrochromium ⁵ , China	--	--	--	18	NA	41
Low-carbon ferrochromium: ⁶						
More than 0.5% but not more than 3% carbon:						
India	--	--	--	20	13	17
Kazakhstan	--	--	--	850	587	1,350
Russia	21	15	36	1,830	1,240	2,030
South Africa	--	--	--	790	433	877
Total	21	15	36	3,490	2,270	4,270
Not more than 0.5% carbon:						
China	--	--	--	4	3	11
France	--	--	--	4	3	8
Germany	440	308	755	2,270	1,590	4,260
Japan	320	224	864	916	642	2,440
Kazakhstan	--	--	--	1,570	1,070	2,330
Russia	4,060	2,780	6,000	15,200	10,400	21,600
South Africa	--	--	--	208	105	93
Turkey	4	2	8	4	2	8
Total	4,820	3,320	7,630	20,200	13,800	30,800
All grades:						
China	8	5	5	35	31	63
France	--	--	--	4	3	8
Germany	440	308	755	2,270	1,590	4,260
India	--	--	--	20	13	17
Japan	320	224	864	916	642	2,440
Kazakhstan	7	5	9	50,900	35,200	54,200
Russia	10,900	7,300	12,200	40,300	26,900	43,500
South Africa	7,840	3,960	4,740	91,400	46,400	58,400
Turkey	4	2	8	4	2	8
Zimbabwe	4,050	2,410	3,530	29,700	17,700	24,200
Total	23,500	14,200	22,100	216,000	128,000	187,000

NA Not available. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Ferrochromium containing more than 4% carbon.

⁵Ferrochromium containing more than 3% but not more than 4% carbon.

⁶Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2005, BY GRADE AND BY COUNTRY¹

Grade and country	May		January-May ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
China	1	\$29	28	\$267
France	--	--	3	52
Germany	--	--	8	122
Japan	23	631	161	3,200
Korea, Republic of	--	--	1	22
Russia	20	118	80	401
Spain	19	82	57	248
Sweden	--	--	(4)	3
United Kingdom	--	--	(4)	148
Total	64	860	338	4,470
Waste and scrap:				
Australia	--	--	2	11
Germany	--	--	3	51
Japan	--	--	9	120
Total	--	--	14	183
Other than waste and scrap and unwrought powders:				
Austria	--	--	(4)	4
China	181	914	1,210	5,550
France	200	1,620	1,050	8,130
Germany	7	33	18	144
India	--	--	1	5
Italy	--	--	4	38
Japan	--	--	25	1,050
Russia	359	3,730	1,660	12,600
United Kingdom	182	1,160	729	4,650
Total	928	7,450	4,700	32,200
All grades:				
Australia	--	--	2	11
Austria	--	--	(4)	4
China	182	943	1,240	5,810
France	200	1,620	1,060	8,180
Germany	7	33	30	317
India	--	--	1	5
Italy	--	--	4	38
Japan	23	631	195	4,370
Korea, Republic of	--	--	1	22
Russia	379	3,850	1,740	13,000
Spain	19	82	57	248
Sweden	--	--	(4)	3
United Kingdom	182	1,160	729	4,800
Total	991	8,310	5,050	36,800

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revised data.

³Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

⁴Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2005¹

Stainless steel product	May		January-May	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
Exports:				
Ingot	852	\$4,260	3,580	\$19,600
Flat-rolled (width > 600 mm)	14,200	43,600	76,600	209,000
Flat-rolled (width < 600 mm)	16,400	51,900	56,000	203,000
Bars and rods in irregular coils	616	1,660	2,480	7,060
Other bars and rods	2,210	14,100	12,700	66,100
Wire	490	4,210	2,420	18,100
Tubes, pipes, hollow profiles	2,790	17,500	14,900	83,600
Total	37,600	137,000	169,000	606,000
Stainless steel scrap	43,100	52,500	257,000	277,000
Grand total	80,700	190,000	426,000	883,000
Imports:				
Ingot	13,600	39,600	76,300	208,000
Flat-rolled (width > 600 mm)	21,200	58,500	131,000	350,000
Flat-rolled (width < 600 mm)	3,630	15,000	17,600	69,300
Bars and rods in irregular coils	4,320	13,000	19,400	55,100
Other bars and rods	9,900	38,200	44,900	175,000
Wire	3,990	18,100	17,300	74,200
Tubes, pipes, hollow profiles	9,090	56,600	43,100	229,000
Total	65,700	239,000	350,000	1,160,000
Stainless steel scrap	11,100	12,200	57,100	65,000
Grand total	76,800	251,000	407,000	1,230,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.